

CLAIMS

1. An impact absorbing member of a motor vehicle interposed between a bumper facia and a vehicle body so as to absorb an impact applied to the bumper facia, comprising:

a bumper beam arranged in a side of said vehicle body and made of a metal or a plastic; and

a hollow body arranged in a side of said bumper facia and made of a plastic,

wherein said hollow body is structured by a first wall in a side of said bumper facia and a second wall in a side of said bumper beam which are opposed to each other leaving a space, and a peripheral wall connecting peripheral edge portions of both the walls, and said first wall and said second wall are provided with a plurality of concave ribs depressed to an inner side in an opposing manner and having weld surfaces welded to each other.

2. An impact absorbing member of a motor vehicle interposed between a bumper facia and a vehicle body so as to absorb an impact applied to the bumper facia, comprising:

a bumper beam arranged in a side of said vehicle body and made of a metal or a plastic; and

a hollow body arranged in a side of said bumper facia and made of a plastic,

wherein said hollow body is structured by a first wall in a side of said bumper facia and a second wall in a side of said bumper beam which are opposed to each other leaving a space,

and a peripheral wall connecting peripheral edge portions of both the walls, a plurality of concave rib pairs constituted by one concave rib and the other concave rib are formed by depressing said first wall toward said second wall and depressing said second wall toward opposing said first wall, said one concave rib and said other concave rib have weld surfaces in which leading end portions are integrally welded to each other, a pair of plate-like ribs constituted by one plate-like rib and the other plate-like rib are formed so as to connect a plurality of concave ribs by protruding said first wall toward opposing said second wall, and protruding said second wall toward opposing said first wall, and said one plate-like rib and said other plate-like rib have a weld portion in which leading end portions thereof are integrally welded to each other.

3. An impact absorbing member of a motor vehicle interposed between a bumper facia and a vehicle body so as to absorb an impact applied to the bumper facia, comprising:

a bumper beam arranged in a side of said vehicle body and made of a metal or a plastic; and

a hollow body arranged in a side of said bumper facia and made of a plastic,

wherein said hollow body is structured by a first wall in a side of said bumper facia and a second wall in a side of said bumper beam which are opposed to each other leaving a space, and a peripheral wall connecting peripheral edge portions of both the walls, and said first wall and said second wall are provided with a plurality of concave ribs depressed toward an

inner side of a hollow portion in an opposing manner and having weld surfaces welded to each other, a plurality of plate-like ribs protruding toward the inner side of the hollow portion in an opposing manner and having weld portions in which leading ends thereof are welded to each other, and a connection rib depressed toward the inner side of the hollow portion and formed in a concave groove shape.

4. An impact absorbing member of a motor vehicle as claimed in claim 1, 2 or 3, wherein a height (b) from the first wall to the weld surface in the one concave rib formed in said hollow body is between 15.0 and 35.0 mm, a height (c) from the second wall to the weld surface in the other concave rib is between 15.0 and 35.0 mm, and an average interval (a) from the first wall to the second wall in the impact absorbing member is between 30.0 and 70.0 mm.

5. An impact absorbing member of a motor vehicle as claimed in claim 1, 2, 3 or 4, wherein the one concave rib formed in said hollow body is formed in an approximately cylindrical shape, the first wall and the second wall are provided with an approximately circular open hole in which a diameter (d) by the concave rib is between 15.0 and 30.0 mm, and the weld surfaces formed in the leading end portions of a pair of concave ribs are formed in an approximately circular shape in which a diameter (e) is between 5.0 and 15.0 mm.

6. An impact absorbing member of a motor vehicle as claimed in claim 3, 4 or 5, wherein the connection rib formed in said hollow body is interposed between the adjacent concave

ribs so as to rise up in a forward moving direction.

7. An impact absorbing member of a motor vehicle as claimed in claim 3, 4, 5 or 6, wherein the connection rib formed in said hollow body is formed in a concave shape in which a depth is between 3.0 and 8.0 mm.

8. An impact absorbing member of a motor vehicle as claimed in claim 3, 4, 5, 6 or 7, wherein the concave rib formed in said hollow body is arranged on a virtual straight line, and the connection rib is formed on said virtual straight line.

9. An impact-absorbing member of a motor vehicle as claimed in claim 8, wherein the virtual straight line formed in said hollow body has an angle within a range between 30 degree and 60 degree with respect to a horizontal line.

10. An impact absorbing member of a motor vehicle as claimed in claim 8 or 9, wherein an added length of all the connection ribs formed in said hollow body is within a range between 20% and 60% of an added length of all the virtual straight lines.

11. An impact absorbing member of a motor vehicle as claimed in claim 3, 4, 5, 6 or 7, wherein the connection rib formed in said hollow body is formed in a direction approximately orthogonal to the plate-like rib.

12. An impact absorbing member of a motor vehicle as claimed in 3, 4, 5, 6, 7, 8, 9, 10 or 11, wherein the connection rib formed in said hollow body is formed only in the first wall.

13. An impact absorbing member of a motor vehicle as claimed in claim 2, 3, 4 or 5, wherein the plate-like rib formed

in said hollow body is formed in a plate shape in which a thickness (f) is between 2.0 and 10.0 mm.

14. An impact absorbing member of a motor vehicle as claimed in claim 2, 3, 4, 5 or 13, wherein the one plate-like rib or the other plate-like rib formed in said hollow body is formed in a concave groove shape.

15. An impact absorbing member of a motor vehicle as claimed in claim 2, 3, 4, 5 or 13, wherein the one plate-like rib or the other plate-like rib formed in said hollow body is formed in a solid plate shape.

16. An impact absorbing member of a motor vehicle as claimed in claim 2, 3, 4, 5, 13 or 14, wherein a reinforcing core material is buried in the one plate-like rib or the other plate-like rib formed in said hollow body.